

**Amendments to the claims**

This listing of claims will replace all prior versions and listings of claims in the application.

1 (currently amended): An isolated antimicrobial peptide, named myticin, from a bivalve mollusk, having a molecular ~~mass~~ weight of approximately 4.5 kDa; a pI of approximately 8.7; and 8 cysteine residues; wherein said peptide further comprises the following sequence:

HX<sub>1</sub>HX<sub>2</sub>CTSYX<sub>3</sub>CX<sub>4</sub>KFCGTAX<sub>5</sub>CTX<sub>6</sub>YX<sub>7</sub>CRX<sub>8</sub>LHX<sub>9</sub>GKX<sub>10</sub>CX<sub>11</sub>CX<sub>12</sub>HCSR

in which: X<sub>1</sub> = P or S, X<sub>2</sub> = V or A, X<sub>3</sub> = Y or W, X<sub>4</sub> = S or G, X<sub>5</sub> = S or G, X<sub>6</sub> = R or H, X<sub>7</sub> = G or L, X<sub>8</sub> = N or V, X<sub>9</sub> = R or P, X<sub>10</sub> = L or M, X<sub>11</sub> = F or A, and X<sub>12</sub> = L or V (SEQ ID NO: 5).

2 (cancelled)

3 (previously presented): The peptide of claim 1, chosen from the group consisting of:

- a peptide comprising the following sequence (Ia):

HSHACTSYWCGKFCGTASCTHYLCRVLHPGKMCACVHCSR (Ia) (SEQ ID NO: 6)

- a peptide comprising the following sequence (Ib):

HPHVCTSYYCSKFCGTAGCTRYGCRNLHRGKLCFCLHCSR (Ib) (SEQ ID NO: 7).

4 (withdrawn): A nucleic acid comprising a sequence encoding the peptide as claimed in claim 1.

5 (cancelled)

6 (withdrawn): An expression cassette comprising at least one nucleic acid sequence as claimed in claim 4, under the transcriptional control of a suitable promoter.

7(withdrawn): A recombinant vector, characterized in that it comprises at least one nucleic acid sequence as claimed in claim 4.

8 (withdrawn): A prokaryotic or eukaryotic cell transformed with a nucleic acid sequence as claimed

in claim 4.

9-10 (cancelled)

11 (withdrawn): A nucleic acid comprising a sequence which encodes a peptide as claimed in claim 1.

12 (withdrawn) : A nucleic acid comprising a sequence which encodes a peptide as claimed in claim 3.

13 (withdrawn): A method of detecting a nucleic acid as claimed in claim 4 comprising screening a nucleic acid library with a fragment of more than 15 base pairs of the coding region of either SEQ ID NO:1 or SEQ ID NO: 3.

14 (withdrawn): A prokaryotic or eukaryotic cell transformed with a nucleic acid sequence as claimed in claim 11.

15 (withdrawn): A method of producing a myticin antimicrobial peptide which has a molecular mass weight of approximately 4.5 kDa, a pI of approximately 8.7 and containing 8 cysteine residues, comprising culturing the transformed cell of claim 8 under conditions effective for the expression of the nucleic acid which encodes the myticin peptide.

16 (withdrawn): A method of producing a myticin antimicrobial peptide which has a molecular mass weight of approximately 4.5 kDa, a pI of approximately 8.7 and containing 8 cysteine residues, comprising culturing the transformed cell of claim 14 under conditions effective for the expression of the nucleic acid which encodes the myticin peptide.

17 (withdrawn): A method of treating a bacterial, fungal or parasitic infection in a patient or animal comprising administration of an amount of the myticin antimicrobial peptide of claim 1

effective to inhibit further growth of the infectious organism.

18 (withdrawn): A method of treating a bacterial, fungal or parasitic infection in a patient or animal comprising administration of an amount of the myticin antimicrobial peptide of claim 1 effective to inhibit further growth of the infectious organism.

19 (new): An isolated peptide comprising the amino acid sequence of SEQ ID NO: 6.